STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Norman H. Bangerter, Governor
Dee C. Hansen, Executive Director
Dianne R. Nielson, Ph.D., Division Director

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

March 26, 1986

Mr. Birrell Hirschi
Bureau of Land Management
Box 778
Fillmore, Utah 84631

Dear Mr. Hirschi:

Re: Southwestern Portland Cement Reclamation Comments by DOGM, PRO/023/010, Juab County, Utah

Enclosed please find the Division's deficiency comments for Southwestern Portlands Cement, Navajo Sandstone Quarry.

I hope they are of help to you. If we can help you further please contact us anytime.

Sincerely,

David W. Darby

David Darby
Reclamation Geologist

jvb
Enclosure
cc: W. Hedberg
0005R-9

FILE COPY

STATE OF UTAH
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pwh

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March 13, 1986

CERTIFIED RETURN RECEIPT REQUESTED
(P592 431 339)

Mr. Marv Berg, P.E.
Quarry Superintendent
Southwestern Portland Cement
Mountain Division
P. O. Box 529
Lyons, Colorado 80540

Dear Mr. Berg:

RE: Mining and Reclamation Plan, Navajo Sandstone Quarry, PRO/023/010, Juab County, Utah

The Division has completed its review of Southwestern Portland Cement Company's MR-1 permit application for the Navajo Sandstone Quarry (received December 23, 1985). I apologise for the unforeseen delay in providing our response to your initial MR-1 application. The application is incomplete and the following technical deficiencies must be addressed by the operator before the permitting process can continue.

TITLE 40-8-9 VERIFICATION OF INFORMATION - DWH

The operator has failed to complete page 11 of the MR-1 form. The application must be signed by an appropriate corporate officer of the company, dated and notarized. Any formal requests for a variance from the standards of rule M-10 should also be so indicated on this page.

TITLE 40-8-12 - DH

Some concern exists for maintenance of the physical integrity of the two ephemeral stream channels which drain into the mine site area. There is some evidence that shows the south drainage to have been backfilled and blocked sometime in the past. The Operator must commit to keeping the two channels unobstructed at all times.

TITLE 40-8-17 - COMPLIANCE WITH OTHER LAWS - DWH

The operator has indicated that the mine site disturbance exceeded five (5) acres during 1985. Has the BLM been notified or requested that the operator file a plan of operations for the project? Has any bonding requirements been requested of the operator from the BLM for the project?

Rule M-3 - RECLAMATION PLAN REQUIREMENTS - LK

(2)(e) Has the BLM agreed to restrict grazing on the area until successful revegetation is established? Will the area be fenced to keep cattle from adjacent areas off the reclaimed area until sufficient vegetation is established?

The proposed seed mix identified under item 23-E is not sufficient for final reclamation in that it lacks forbs and shrubs. Attached are two seed mixes which are acceptable to the Division and should provide for a diverse, stable community.

The operator has not discussed mulching. Mulch should be applied and anchored to all reseeded areas for moisture retention and added erosion control, especially on the steep slope areas. Please identify the type of mulch (i.e., wood fiber hydromulch, hay, straw, etc.) and rate of application (standard rate is usually between one and two tons per acre). Also, explain how the mulch will be anchored (i.e., chemical tackifier, crimping, netting, etc.).

Topsoil stockpiles should be seeded to promote a quick establishment of a protective vegetation cover. To simply allow natural invasion to revegetate these topsoil piles is not acceptable.

RULE M-3 RECLAMATION REQUIREMENTS, TOPSOIL AND OVERBURDEN - DWH

(2)(c) The operator states on page 6 of the MR-1 application, #21(B), that soils average 6-10 inches in deoth and that the calculated volume of soil to be stockpiled is 500 CY. Please present the calculations used to derive this volume. Is this estimate for the proposed disturbance for the life of mine? Is the estimate representative of the amount of soils currently stockpiled?

RULE M-5 SURETY GUARANTEE - JRH

The operator has not submitted a sufficient estimate of the reclamation work required in order to determine the surety amount for reclamation. Such information must be provided to the Division and the surety amount determined by the Division prior to permit approval.

The Division requires that detailed cost estimates be provided to the Division in order to determine the surety amount required. These cost estimates shall include earthwork mass balances (including topsoil), quantity estimates for all materials and work accomplished, equipment selection, and productivity calculations for the equipment to be used. A map shall be provided to the Division to reference the location and extent of the work to be accomplished during reclamation, and to show the sequence and the timing of the reclamation work to be accomplished.

Typically the Division determines costs for reclamation work using the Blue Book Rental Rate Guide for equipment and the Means Site Work Cost Data book for labor and equipment operators, and for demolition and other miscellaneous work. Productivity for equipment is determined using the Caterpillar Equipment book or the Means Site Work Cost Data book. The operator may use these references or other guides in determining his cost estimate. All references to sources of information related to equipment selection, productivity or costs shall be included with the cost estimate.

RULE M-6 PLANS AND MAPS - JRH

The map provided by the operator entitled "Navajo Sandstone Operation" should include; a border clearly outlining the permit area, a border clearly outlining the disturbed areas, the acreages of both the disturbed and the permit areas, all surface facilities or structures within 500 feet of the permit area boundaries, and all such information as required under Rule M-3.

The operator needs to provide to the Division, a map showing the final postreclamation contours of the operation

for the life of the operation. In the event that the mining plans or operations change during the course of the life of the mine, this map shall be modified to reflect those changes.

RULE M-8 REPORTS - JRH

The operator shall provide to the Division an annual report for the work accomplished during the calendar year 1985. This information shall be provided to the Division on form MR-3 (copy enclosed with this review) and shall be submitted to the Division no later than March 31, 1986. The annual report shall include an up-to-date map of the operation showing the contours of the disturbed area and the outline and acreage of the area actually disturbed. This map shall indicate the date of the survey.

RULE M-10 RECLAMATION STANDARDS, PUBLIC SAFETY & WELFARE - JRH

(2)(d) The operator shall post appropriate warning signs in locations where public access to operations is readily available. A sign shall be posted on the access road to the site indicating a warning of the hazards of the site. Signs shall also be posted a reasonable distance form the highwalls indicating potential dangers.

(2)(e) The operator shall include in the reclamation plan, a plan for the protection of the public safety and welfare following mining. This plan should address any potential hazards remaining due to excavations and highwalls left by the operation.

(5) The operator must prove long-term stablity of the benches left by mining in order to obtain a variance for highwalls. Stability shall be determined with a mininmum static factor of safety of 1.5 static and a seismic factor of safety of 1.1. The site is located in Seismic Zone 2 with an average seismic coefficient of 0.13. Calculations shall be provided to the Division indicating the stability of the final slopes and benches of the site. These calculations and the stability determination shall be certified by a registered professional engineer.

(4) Finished slopes of all waste piles shall be 2v:1h or less unless the operator submits calculations and certification from a registered professional engineer demonstrating mass stability of slopes greater than 2v:1h.

RULE M-10 RECLAMATION STANDARDS, SOILS - DWH

(14) Under #21(c) of the MR-1 application, the operator states that topsoil ranges from 0-6 inches in depth and this soil will be dozed to the side. Please indicate why the subsoil is not suitable to salvage for final reclamation of the minesite.

During the Division's onsite field visit, the recently stripped slopes appeared to have suitable soil materials remaining which may have been salvagable for stockpiling. The operator must make concerted efforts to maximize the recovery and protection of the soil resources to the extent practicable during the initial surface disturbing activities.

The operator states on page 8 of the application, that no tests will be performed to evaluate the soil potential to support revegetation. The Division typically requests that a detailed soil analysis be performed upon initial stripping and stockpiling activities to ascertain what levels of nutrients are currently available. This analysis is used as a basis for determining what conditioners or soil amendments may be necessary upon reclamation to bring the soil up to the premining nutrient levels.

It is suggested that at least three (3) samples be analyzed. One from the current stockpile(s) and at least two from the undisturbed areas prior to stripping for future mining. The samples should characterize both the topsoil horizon and the subsoil underlying the topsoil (ie., a split sample from each sampling location). A follow-up soil analysis would be necessary upon cessation of mining operations of the stockpiled soils to compare with the premining analyses. Enclosed is a list of soil parameters which should be analyzed a qualified laboratory now and again after mining.

RULE M-10 RECLAMATION STANDARDS, REVEGETATION - LK

(12) The operator must provide the results of a baseline vegetation survey which gives an estimate of the total vegetation ground cover. This survey is the basis for establishing revegetation success standards and must be done using professionally accepted methodology.

The operator needs to discuss post-revegetation monitoring for the liablility period. At a minimum, describe the methodology, timing and how it will be determined that "sufficient cover crop with an established root system" is developed to allow grazing.

If possible, please provide a response to these deficiencies by April 15, 1986. An expeditious response will help speed the permit review and approval process. Thank you for your patience and cooperation in this permitting matter. Should you have specific questions or need additional information, please contact me.

Sincerely,

D. Wayne Hedberg
Permit Supervisor
Reclamation Hydrologist

DMW/btb
Enclosures
cc: David O. Lower
Dennis Harsh
Lowell Braxton
Randy Harden
Dave Hooper
Lynn Kunzler
Jim Leatherwood
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